

IN THE CLAIMS

Please substitute claims 1-19 with the following:

1. (Currently Amended) A fractal structure ~~having a plurality of regions different in fractal dimension characterizing the self-similarity~~, comprising:

~~said a first region having a first fractal structure being grown from one or more origins under growth conditions providing a first fractal dimension in a portion of the growth process from the start point of time of growth to a first point of time;~~ and

~~a second region having under growth conditions providing a second fractal dimension in another portion of the growth process from said first point of time to a second point of time.~~

2. (Currently Amended) [[A]] The fractal structure according to claim 1 wherein said fractal structure is controlled in nature of phase transition occurring therein by adjustment of the timing for changing said growth conditions.

3. (Currently Amended) [[A]] The fractal structure according to claim 1 wherein said fractal structure is controlled in critical temperature for ferromagnetic phase transition occurring therein by adjustment of the timing for changing said growth conditions.

4. (Currently Amended) [[A]] The fractal structure according to claim 1 wherein said fractal structure is controlled in nature of a chaos appearing therein by adjustment of the timing for changing said growth conditions.

5. (Currently Amended) [[A]] The fractal structure according to claim 1 wherein said fractal structure is controlled in nature of a quantum chaos in an electron state appearing therein by adjustment of the timing for changing said growth conditions.

6. (Currently Amended) [[A]] The fractal structure according to claim 5 wherein said quantum chaos in the electron state is controlled by addition of a magnetic impurity.

7. (Currently Amended) [[A]] The fractal structure according to claim 1 wherein said regions are nebula-like as a whole.

8. (Currently Amended) [[A]] The fractal structure according to claim 1 wherein $D_{f1} > 2.7$ and $D_{f2} < 2.3$ are satisfied where D_{f1} is said first fractal dimension and D_{f2} is said second fractal dimension.

9. (Currently Amended) [[A]] The fractal structure according to claim 1 wherein $2.7 < D_{f1} \leq 3$ and $1 \leq D_{f2} < 2.3$ are satisfied where D_{f1} is said first fractal dimension and D_{f2} is said second fractal dimension.

10. (Currently Amended) [[A]] The fractal structure according to claim 1 wherein $2.9 \leq D_{f1} \leq 3$ and $1 \leq D_{f2} < 2.3$ are satisfied where D_{f1} is said first fractal dimension and D_{f2} is said second fractal dimension.

11. (Currently Amended) ~~A fractal structure forming method for forming a fractal structure having a plurality of regions different in fractal dimension characterizing the self-similarity, comprising:~~

~~growing said fractal structure from one or more origins under growth conditions providing growing a fractal structure using a first fractal dimension in a portion of the growth process from the a start point of time of growth to a first point of time; and~~

~~under growth conditions providing growing said fractal structure using a second fractal dimension in another portion of the growth process from said first point of time to a second point of time.~~

12. (Currently Amended) ~~A fractal structure forming~~ The method according to claim 11 ~~wherein 11, further comprising adjusting the first point of time timing for changing said growth conditions is adjusted to control phase transition occurring in said fractal structure.~~

13. (Currently Amended) ~~A fractal structure forming~~ The method according to claim 11 ~~wherein 11, further comprising adjusting the first point of time timing for changing said growth conditions is adjusted to control critical temperature for ferromagnetic phase transition occurring in said fractal structure.~~

14. (Currently Amended) ~~A fractal structure forming~~ The method according to claim 11 ~~wherein 11, further comprising adjusting the first point of time timing for changing said growth conditions is adjusted to control the nature of a chaos appearing in said fractal structure.~~

15. (Currently Amended) ~~A fractal structure forming~~ The method according to claim 11 ~~wherein 11, further comprising adjusting the first point of time timing for changing said growth conditions is adjusted~~ to control a quantum chaos in an electron state appearing in said fractal structure.

16. (Currently Amended) ~~A fractal structure forming~~ The method according to claim 15 ~~wherein 15, further comprising adding a magnetic impurity is added~~ to control said quantum chaos in the electron state.

17. (Currently Amended) ~~A fractal structure forming~~ The method according to claim 11 wherein $D_{f1} > 2.7$ and $D_{f2} < 2.3$ are satisfied where D_{f1} is said first fractal dimension and D_{f2} is said second fractal dimension.

18. (Currently Amended) ~~A fractal structure forming~~ The method according to claim 11 wherein $2.7 < D_{f1} \leq 3$ and $1 \leq D_{f2} < 2.3$ are satisfied where D_{f1} is said first fractal dimension and D_{f2} is said second fractal dimension.

19. (Currently Amended) ~~A fractal structure forming~~ The method according to claim 11 wherein $2.9 \leq D_{f1} \leq 3$ and $1 \leq D_{f2} < 2.3$ are satisfied where D_{f1} is said first fractal dimension and D_{f2} is said second fractal dimension.